Missouri Department of Natural Resources

Missouri Department of Natural Resources
Regulatory Impact Report
In Preparation For Proposing
A New Rule
10 CSR 60-3.015

Division/Program: DEQ/WWP/PDWB

Rule number: 10 CSR 60-3.015 **Rule title:** Minimum Design Standards for Public Water Systems

Type of rule action: New Rule

Nature of the rulemaking: Prescribes standards for the construction or modification of public water systems so that safe water is provided and the environmental is protected.

Approval of the Completed Regulatory Impact Report

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Program Director Date

Missouri Department of Natural Resources

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Regulatory Impact Report

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Applicability: Pursuant to section 640.015 RSMo, "all rulemakings that prescribe environmental conditions or standards promulgated by the Department of Natural Resources…shall… be based on the regulatory impact report…." This requirement shall not apply to emergency rulemakings pursuant to section 536.025 or to rules of other applicable federal agencies adopted by the Department "without variance."

Determination: The Missouri Department of Natural Resources has determined that, although this rulemaking does not directly prescribe environmental conditions or standards, this rulemaking has potential for significant impacts on public water systems. Accordingly, the Department has produced this regulatory impact report which will be made publicly available for comment for a period of at least 60 days. Upon completion of the comment period, responses will be developed and made available on the agency web page prior to filing the proposed rulemaking with the Secretary of State. Contact information is at the end of this regulatory impact report.

1. **Describe the environmental conditions or standards being prescribed.**

   This rulemaking prescribes standards that must be followed in the design and construction of new or alteration of an existing public water system.

2. **A report on the peer-reviewed scientific data used to commence the rulemaking process.**

   References considered for development and revision of our design standards include (in order of largest to smallest contribution):

   - Drinking water standards publication provided by the Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers. Also known as 10-States Standards, this document is nationally recognized and used by many states. The document is revised by its member states approximately every 5 years.

   - Published standards of American Water Works Association (AWWA) are recognized standards by the American National Standards Institute (ANSI). The standards are updated periodically by committee and approved by AWWA board of directors.

   - Published AWWA manuals and research.

   - Published technical books, documents and industry-specific recommendations.

- Existing laws, regulations, and recommendations pertaining to design requirements.

3. A description of the persons who will most likely be affected by the proposed rule, including persons that will bear the costs of the proposed rule and persons that will benefit from the proposed rule.

The rulemaking will affect:

- Engineering consulting firms involved in public water system design;
- Construction contractors involved in constructing public water systems; and
- Owners, operators, and customers of public water systems. These systems include:
  - Municipalities
  - Regional water suppliers
  - Public water supply districts
  - Private businesses that own public water systems
  - Developers
  - Home owners associations and other incorporated entities

Community water systems that construct new systems or modify existing systems will be required to comply with the minimum standards regulation. Currently, there are approximately 1,473 community water systems located throughout the state. During the lifetime of the rule any or all of these existing systems may submit modifications that can be affected by this rule. It bears mentioning that many systems currently comply with or exceed existing design standards so the practical impact should be isolated and borne incrementally over a period of many years as alterations and replacements are made.

Non-Community standards are presently available in a separate document and they are currently incorporated by reference into Missouri's administrative code. These non-community standards have not been updated since 1982. Since the proposed *Minimum Design Standards For Missouri Public Water Systems* has also incorporated and updated non-community standards, the rulemaking will similarly affect the above mentioned parties that design, build or own non-community water supply systems.

There are currently 1070 non-community water systems possibly affected by the revised standards, and the differences between the community and non-community requirements are detailed in Chapter 9 of the new document. In general, continuous service is not as critical for these systems as they are for community systems, and therefore much of the redundancy requirements have been exempted for non-community systems.

The benefit for the proposed rule is a consistent minimum design standard for Missouri's public water systems that assist in achieving compliance with safe drinking water laws, protect public health and protect the safety of those who operate, maintain, inspect, or are otherwise involved with public water supply systems.

4. **A description of the environmental and economic costs and benefits of the proposed rule.**

   Neither environmental costs nor benefits are expected to directly result from this rulemaking

   The cost for compliance with these standards will be limited to new systems, or existing systems adding to or significantly altering existing infrastructure. In general, the cost impact of the new standards is expected to stay within a consulting engineer's cost estimate for current projects and standards. Isolated cases may incur a noticeably significant increase in some project costs such as installing wells within a flood plain or modifying rural water systems that have originally been restricted to minimum 20 psi design flow and pressure with negligible accommodation for growth.

   The proposed rule is mainly focused on benefits with regard to the health and safety for both customers and utility employees. There will likely be indirect economic benefits in the form of extended life and effective use of constructed infrastructure, fewer liability costs, fewer costs associated with customer dissatisfaction, federal non-compliance costs, and less cost associated with regularly maintaining or replacing failed infrastructure.

5. **The probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenue.**

   With this proposed rulemaking, the Department of Natural Resources' Public Drinking Water Branch is formally adopting policy that has been in effect for many years. No additional long-term costs are expected from implementation of the proposed rule and no impact on state revenue is expected.

6. **A comparison of the probable costs and benefits of the proposed rule to the probable costs and benefits of inaction, which includes both economic and environmental costs and benefits.**

   Public Water Systems must be properly designed to ensure that wells and surface water intake structures tap into a sufficient amount of source water to meet demand; to ensure that treatment plants are adequately designed to remove contaminants so that stringent water quality standards are met; to ensure that storage tanks and the distribution system will provide sufficient and uninterrupted flow to meet current and future demand, including firefighting flows where applicable; and myriad other factors.

   The costs associated with these requirements in the proposed rule are expected to be offset by the previously stated benefits in health, safety and economy. Systems that are properly designed to meet and exceed minimum requirements in this rule are expected to be more manageable and better to operate. Systems that meet and exceed the proposed standards are also expected to be more durable and more flexible with problems or emergencies, which can reduce state and local costs associated with emergency and disaster relief.

Inaction will allow a designer, contractor or system owner the opportunity to install improper, deficient or inferior infrastructure that will increase risks to health and safety, increase potential liability, and increase long-term maintenance costs with relative impunity. The risks are compounded when maintenance or repair necessary to counteract improper design and construction is deferred or absent. Inaction will deny enforceable, minimum requirements intended to set a level playing field for all entities responsible for design and construction of public drinking water infrastructure. Inaction will discourage responsible planning, design and construction of public water supply infrastructure in favor of short-term individual or private gains.

7. **A determination of whether there are less costly or less intrusive methods for achieving the proposed rule.**

The proposed rule is based on a solid foundation of peer-reviewed standards and sound engineering principles for meeting current health and safety expectations. Costs for providing public drinking water services are more responsive to individual factors such as:

- System size and population;
- System geographic and topographic size and complexity;
- Source water quantity, quality and location
- Consumer expectations
- Operation and maintenance practices

In general, reducing design costs would make it necessary to increasingly monitor and enforce these individual factors to compensate, which is likely to be more costly and intrusive in general.

8. **A description of any alternative method for achieving the purpose of the proposed rule that were seriously considered by the department and the reasons why they were rejected in favor of the proposed rule.**

No alternative methods were considered. The Missouri Department of Natural Resources has the authority and responsibility under state drinking water law to regulate construction, extension, or alteration of public water systems in accordance with rules promulgated by the Safe Drinking Water Commission. The purpose of the proposed rule is consistent with this responsibility and formalizes existing policy to ensure its enforceability.

9. **An analysis of both short-term and long-term consequences of the proposed rule.**

Neither the short-term nor the long term outlook of the proposed rule is expected to significantly change what has already been policy for decades. The potential consequences in terms of costs and benefits have been provided in other sections.

10. An explanation of the risks to human health, public welfare or the environment addressed by the proposed rule.

Additional risks to human health, public welfare or the environment not otherwise noted in this report are not expected to be significant.

11. The identification of the sources of scientific information used in evaluating the risk and a summary of such information

General risks to public health in regards to improper design, construction, operation or maintenance of public drinking water systems are publicly available from sources such as the United States Environmental Protection Agency and the Centers for Disease Control and Prevention. Other available sources include research published by the Water Research Foundation and public/private institutions. The information provided through this research is the basis for AWWA and 10-States Standards, and subsequently our own design standards.

12. A description and impact statement of any uncertainties and assumptions made in conducting the analysis on the resulting risk estimate.

It is assumed that our references base standards decisions on the best available information at the time of publication. There is always a risk that future research or data may support more stringent or less stringent standards, which will be addressed with periodic updates and rulemaking.

13. A description of any significant countervailing risks that may be caused by the proposed rule

1. A proposed risk made by concerned stakeholders during recent informal comments is the viewpoint that standards are too rigid or prescriptive and don't allow for engineering decisions or new technologies. We have addressed this in numerous ways:
    - The standards reflect minimum design standards and do not restrict the designer from creating a better system.
    - The terms "shall" and "must" are used where practice is sufficiently standardized to permit specific delineation of requirements or where safeguarding of public health and safety justifies a definite action. Where there is not sufficient standardization or general applicability, the terms "should" and "preferred" are used to allow individual consideration.
    - Variances have been built into the document to provide certainty for cases where the intent of specific requirements might be ambiguous.
    - Procedures for completing and submitting variance requests for any requirement have been built in. Prior to finalization, these procedures will be available in a separate chapter.
    - An explicit process for new or unproven technologies and process have been built in to allow for innovation.

- An informal appeals process that will allow for faster decisions than the formal appeals process has been built in.

2. Another proposed risk from stakeholders is the possible use of our design standards as an inspection tool. A disclaimer has been included within the preamble of the document under "To Whom Do These Standards Apply" to eliminate the document's applicability as an inspection tool.

14. The identification of at least one, if any, alternative regulatory approaches that will produce comparable human health, public welfare or environmental outcomes.

Authority to regulate and enforce any and all items listed under item #7, where feasible, could potentially produce comparable human health and public welfare outcomes.

The regulatory approach being proposed is an incorporation by reference of the revised design standards document. An alternative regulatory approach could have been a proposal to include in the *Code of State Regulations* only requirements from the design standards ("shall") and not include items that are recommendations only. The result would be the same but the distinction between regulatory requirements and suggestions may be more clear.

15. Provide information on how to provide comments on the Regulatory Impact Report during the 60-day period before the proposed rule is filed with the Secretary of State

Written comments must be sent to the following address:

Mr. Ryan Seabaugh
Missouri Department of Natural Resources
Public Drinking Water Branch
1101 Riverside Drive
P.O. Box 176
Jefferson City, Missouri 65102-0176
Attn: Permits and Engineering Design Standards Revision

Or E-mailed to: PDW.Permits@dnr.mo.gov

16. Provide information on how to request a copy of comments or the web information where the comments will be located.

A summary of comments and responses will be provided online at:
http://dnr.mo.gov/env/wpp/rules/wpp-rule-dev.htm.